



Webcams - a diagnostic tool for forecaster

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The weather observing system is constantly growing during time. Following this, the webcams complement the system and provide added value to the traditional observations.

Strictly, a webcam sensor detects the radiation in the visible range, similar to human eye. Meteorological elements that could be primarily obtained qualitatively by cameras are clouds and visibility. Depending on the webcam's focus and range, even additional parameters could be occasionally estimated e.g. ground state (snow coverage), strong wind or present weather (precipitation or litometeors). Despite some limitations e.g. during night or strong sunshine, or because the transformation of "sphere" to a 2D picture or the maintenance required during rain or snow, web cameras provide valuable additional information to the forecaster. Similarly to satellite images, the most beneficial way of using webcams is to analyse a sequence of images (e.g. latest one hour) which reveals current physical processes in the atmosphere.

In the presentation, several examples of webcam application will be shown:

- development from low stratus to towering cumulus,
- comparing animation with sounding data (or model),
- differing between cumulus and stratocumulus cloudiness,
- recognizing significant levels within convection cloud,
- differing layers with different moisture content,
- relate cloud motions and characteristics with models and other observations.

Apart from webcams at the airports, we also use webcams which are situated near the routes for low level flights. They are situated at saddles, top of mountains or similar points from where clear view could be obtained. Prime purpose is to estimate if the route is closed, but also to monitor changes in clouds and other weather parameters. By using the network of webcams in above mentioned way, forecaster could make better diagnose of current weather.